In the Specification:

Please **add** a new heading at **page 1, above line 1**, as follows:

TITLE OF THE INVENTION

Please **add** a new heading at **page 1, above line 2**, as follows:

FIELD OF THE INVENTION

Please **replace** the paragraph at **page 1, lines 2 to 3**, with a replacement paragraph amended as follows:

The invention relates to a method for calibrating 3D image sensors ~~according to the preamble of patent claim 1.~~ using a multi-pixel receiving array to measure distance based on a phase relation between an emitted light signal and a received reflected light signal.

Please **add** a new heading at **page 1, above line 4**, as follows:

BACKGROUND INFORMATION

Please **replace** the paragraph at **page 1, lines 20 to 27**, with a replacement paragraph amended as follows:

From DE 101 26 086 A1 an optoelectronic sensor is known, wherein, for ~~referencing the light,~~ purposes of referencing, the light from the emitting element used for illuminating the scene or from a separate emitting element ~~emits towards~~ is emitted toward a reference object within the sensor, and ~~the reference object detects~~ the received

signal reflected from the reference object is detected as a reference signal by ~~means of~~ a separate receiver or by the receiver provided for receiving reflections from the scene, and ~~whereafter~~ aging and temperature effects are derived ~~from said reference signal.~~ therefrom. By amplitude modulation at the emitter and ~~by means of~~ a phase ~~comparator~~ comparison at the receiver, a distance information is derived also with this ~~sensor, too.~~ sensor.

Please **add** a new heading at **page 2, above line 18**, as follows:

SUMMARY OF THE INVENTION

Please **replace** the paragraph at **page 2, lines 20 to 22,** with a replacement paragraph amended as follows:

This object is achieved by a method ~~with the features of the relevant independent claims. The invention is advantageously realized according to the features of the dependent claims.~~ according to the invention, namely a method for calibrating a 3D image sensor, said sensor comprising:

a modulated light source emitting a modulated emitted signal into a viewed scene; and

a receiving array having a plurality of pixels and being adapted to receive detected radiation that is reflected from the viewed scene, and respectively generating a received signal for every pixel individually from a demodulation signal having a predetermined phase

position of a modulation thereof with respect to the emitted signal and from the detected radiation reflected by the viewed scene, said received signal being used as a measure of distance based on a transit time of the modulated emitted signal emitted into the viewed scene and the arising detected radiation that is reflected from the viewed scene and received by the receiving array;

characterized in that

for performing a calibration, the entire receiving array is exclusively illuminated with a first modulated calibrating radiation having a first phase position of a modulation thereof which is at least largely homogeneous for all of the pixels with respect to the demodulation signal, and that the received signals generated by the individual pixels during illumination with the calibrating radiation are evaluated.

Please **add** a new heading and a new paragraph at **page 3, above line 26**, as follows:

BRIEF DESCRIPTION OF THE DRAWING

In order that the invention may be clearly understood, it will be described in connection with example embodiments thereof, with reference to the accompanying drawing, of which the single figure schematically shows a block flow diagram of steps and further features of an example embodiment of a method according to the invention.

Please **add** a new heading at **page 3, above line 26**, as follows:

DETAILED DESCRIPTION OF EXAMPLE EMBODIMENTS OF THE INVENTION

Please **replace** the paragraph at **page 4, lines 15 to 26**, with a replacement paragraph amended as follows:

In a second embodiment of a method according to the invention, as represented in the drawing figure, the entire receiving array is calibrated by deflecting the illuminating light [[~~of~~]] emitted by the emitting unit such that an internal light connection or light path between the emitter and the receiving array is established. At the same time, the external light connection or light path for illuminating the scene is interrupted in this case so that no emitted light incident as a reflection from an unknown scene and thus comprising an unknown phase shift can illuminate the pixels. During the measurement of distances it is ~~guaranteed~~ assured that the internal light connection is interrupted again so that the phase measurement via the external light path is not disturbed. These closing apparatuses used for interrupting the light paths or connections are formed as one or more mechanical change-over switches, for example. In practice, however, one tries to use as few movable components as possible. Also in this case, the phase relation between the modulated emitted signal and the received signal is varied for making calibration with different phase positions (virtual

distances) possible. The other inventive features as described above, e.g. recording deviations in a look-up table, are also performed in this second embodiment.

[RESPONSE CONTINUES ON NEXT PAGE]